

# Introducing systemic design to support an Australian Government regulatory agency address complex problems

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## Certificate of authorship

I certify that the work in this thesis has not previously been submitted for a degree nor has it been submitted as part of requirements for a degree except as part of the collaborative doctoral degree and/or fully acknowledged within the text.

I also certify that the thesis has been written by me. Any help that I have received in my research work and the preparation of the thesis itself has been acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

Signature of Student:

A handwritten signature in black ink, appearing to read 'Bella', with a long horizontal flourish extending to the right.

Date: 23 November 2017

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## My motivations to study design

Although it seems a long time ago, my earliest desires were to be an artist. This passion was sparked with my Grandmother patently teaching me to draw facial expressions on the blank-headed stick figures I'd been scribbling as a pre-schooler. It evolved with enrolment into every high school art class available and sleepless nights joyfully creating imaginary scenes in oil paints. Naturally, I enrolled into a media arts degree after school that I assumed would provide the commercial reality for a creative career.

However, towards the end of that first year of study, I had some kind of empty feeling about what we were being led into. It seemed like there was a choice between either leading a life of rebellion creating something from your own individual vision (and being poor but happy), or creating something from someone else's vision in a commercial setting (and being rich but guilty)! I had a vision of a different life; one where I could work with a group of people in a position of leadership to improve the way we live. To apply creativity not to aesthetic ideals but to the design of things that are meaningful in our lives.

This idea led me to study communications, including content streams in creative communications and corporate social responsibility. Then onto work in private sector roles in stakeholder engagement and community relations, and later to provide communications and strategic projects advice within a government regulator. These roles all involved working with complex, multi-stakeholder problems. There always seemed to be some incremental progress made against these problems, although it was never clear how to best go about this. Although valiant efforts were being applied, businesses and governments were still failing to bring about meaningful solutions to entrenched problems.

The question of how organisations can embrace diverse stakeholder perspectives and find new solutions in complex scenarios brought me back to the idea of design. At the time, design thinking had entered the public lexicon as offering creative processes and methods to solve problems. However, as I have explored design more deeply through this research degree, I can understand design as a new way to see, think and act in order to bring about meaningful change within complex systems (Dorst 2015b). This is exactly the kind of design I was intuitively seeking in my post-high school studies, which has evolved from the traditional design practice that I was being trained in (Jones 2013). This type of design is also very different to the conventional problem-solving approaches within our current organisations that is no longer capable to address the increasingly complex problems we face (Dorst 2015b)

This thesis is a result of my explorations into conventional problem-solving practice within a government regulator, the nature of these complex problems and why we keep failing to address them, and systemic design practices that can help us to create positive change in the most complex systems and environments (Jones 2013). It is also a stamp on my newly formed professional identity – as an artist in meaningful social change; as a systemic designer.

## Acknowledgements of support

Many times in writing this thesis, I felt like I was sitting in a room full of knowledge and drawing down on the pieces that I could integrate and weave together to make sense of my research. I'm grateful for all the wonderful thinkers who have populated this knowledge room, and their efforts to give form to these perceptions of reality that may have been very foreign to the world at their time of writing. This makes my job very easy and I'm delighted to be able to contribute something to that room of knowledge. My design heroes who have committed themselves to this effort can be easily identified in this thesis as Kees Dorst, Peter Jones and Harold Nelson.

Thank you to Mieke van der Bijl-Brouwer, who supervised me through this process. You have been trusting and flexible with my approach to learning and incredibly structured and thoughtful in providing the right prompts and theoretical frameworks that I needed. Your passion for these subjects is infectious and I love the way that our ideas have evolved together as new fields and theories have opened up within the scope of this research. We make a great team.

Thank you to the academics and practitioners at the University of Technology Sydney (UTS) Design Innovation research centre and Designing Out Crime research centre. You have been a continued source of inspiration and connection to world-leading design for some of Australia's most challenging issues.

To the academics on my confirmation of candidature panel – Melissa Edwards, Bligh Grant and Liisa Naar – although we only had a brief feedback session, your comments have often been with me as I've been completing this research and have helped to shape my work.

And thank you to the Australian Government regulatory agency who trusted me to observe and interview project staff, introduce some strange systemic design ideas and implement design experiments. Your most senior leaders through to project officers were all willing to have me examine your practice and to consider new ways to do things. Your participation has made this a very practical and real research project that I have benefitted greatly from.

## The research environment

This research was conducted in two environments—within the UTS Design Innovation research centre (and alongside the sister Designing Out Crime research centre) as well as within the Australian Government regulatory agency that is the subject of this research. In line with research agreements, the regulatory agency is not named in this research and is referred to by an alias ‘Agency X’. This co-location enabled a rich learning position with information being gathered and made sense of within two very different organisational contexts.

The UTS Design Innovation research centre is a transdisciplinary centre focussed on innovative, design-oriented research with the potential to transform the companies we work for and the cities in which we live. The centre forms part of the UTS Creative Intelligence Strategy. The centre progresses two main design methodologies – design-led innovation, which is mainly focussed on business growth and competitiveness in the private sector; and frame creation, which is mainly focused on complex problem solving in the public sector (Thurgood et al. 2015).

Agency X is an Australian Government regulator responsible for ensuring quality of goods and services provided by a specific business sector. The business sector being regulated is large and very diverse, ranging from small family operated businesses to large multi-national enterprises. The customer base of the regulated sector is also extremely diverse. I was also employee of the Agency X from 2011 until late 2016, most recently as an officer working at a strategic level with executive managers in the agency. The research component was conducted part time and outside of my regular duties. Being embedded as an employee in Agency X enabled me to understand regulatory problem-solving practices and the genuine challenges in achieving innovation within a public-sector context.



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## Abstract

Government regulatory agencies are important stakeholders in addressing complex societal problems and are beginning to recognise that these kinds of problems cannot be managed using traditional regulatory tools. This master's thesis seeks to understand the current practice of a regulatory agency in addressing a complex problem and to determine whether this can be supported by methods from the field of systemic design. Existing regulatory problem-solving practices are examined and their limitations for addressing complex social problems are identified when viewed alongside concepts from systems thinking and complexity theory. A qualitative case study is then conducted within an Australian Government regulatory agency to understand their current practice in addressing complex problems and the various contextual influences. Systemic design practice is examined as alternative way to address complex problems. A comparison of the findings from the current regulatory practice with systemic design principles identifies numerous opportunities to introduce systemic design into regulatory practice. A specific systemic design intervention is developed to trial within the regulatory context. This is applied within a second case study in the regulatory agency to understand the design outcomes, benefits and limitations of the intervention. The thesis concludes that systemic design principles and methods have the potential to support regulatory agencies to navigate compartmentalised governance systems by establishing a shared frame of reference to problems and the co-design of new responses. It proposes that the incorporation of systems thinking and complexity theories within design methods increases the likelihood of them being taken seriously in the government sector and that methods need to be tested and adapted further to enable integration within existing regulatory practice.

